

Appl. No. 09 / 287,478  
Amdt. dated Sep. 29, 2003  
Reply to Office action of Mar. 28, 2003

### REMARKS-General

The applicant has amended claims 11-13 for clarity and definiteness, including the creation of a new claim 14, now the predecessor to claim 12.

With regard to item 4 of the detailed action:

Van Huben, et al, 5,966,707 (707) claims priority from all of the IBM Dec. 6, 1996 DCS/DMS PFVL filings: 5,812,130 (130), 5,826,265 (265), 5,864,875 (875), 5,878,408 (408), 5,920,867 (867), 5,920,873 (873), 5,950,201 (201), 6,035,297 (297), 6,088,693 (693), and so these earlier patents should rightly be considered collectively.

The use of browser state (cookies or path-info) to create a dynamic temporary account mechanism for CAD synthesis and simulation is a fundamental distinction between the present invention and the prior art. The claims of the present invention ordinarily relate to http/www-compatible methods and so we find that the Dec. 1996 filings teach this about the WWW/Internet access methods of Van Huben, (5,950,201, column 28, lines 11-39):

“WWW/Internet Access (Section 1.18)

The DCS provides a mechanism which permits access to all process and pseudo process results through the World Wide Web. Key quality control indicators can be exported out of the DCS into an accessible format by users on the WWW. Usually these results would exist in a secure repository which could only be accessed by WWW users who are working on the project. This same mechanism can be used for network access in general, including the extranets, intranets, and the internet. In addition to accessing information, the ALMs can receive special e-mail requests from users to perform these tasks:

Generate various status reports on topics such as PN-EC and Design Fix Tracking, Process & Pseudo Process Results, or BOM information. The DCS would generate the report on the fly and return it to the user's Internet or e-mail address.

If the user has the proper authority, he can submit e-mail requests to add pseudo-process information into the DCS. The contents of the mail would contain a specifically formatted command which the DCS can interpret to set the appropriate results. This could be used by people remotely connected to a project (such as the chip foundry) to send status information directly to the DCS.

The DCS permits an authorized user to send commands through the Internet Common Gateway Interface (CGI) to query information from the DCS or invoke Designer Initiated Library Processes (DILPs).

In the Dec. 6, 1996 Van Huben patents, the internet is viewed as a means principally to retrieve job status and potentially restart failed jobs – not at all the public interactive methods described in the present application. There is no mention of “WebBrowser” until (707). The tentative and limited disclosure of WebBrowser functionality in (707) implies the more sophisticated functionality disclosed in the present invention was not

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contemplated by Van Huben at that time, and in any event, not disclosed. Even within (707), some things point to an unfamiliarity with web technology such as the positing of a non-existent ".DOC" top-level domain ((707) Fig. 3B "HTTP://WWW.MPEG.DOC").

With regard to DILP, all the Dec. 6 filings contain the following description of a Designer Initiated Library Process (DILP) mechanism (5,950,201, col 20, line 58 to col 21 line 10):

"This is very similar to a post process, but instead of the DCS launching the process, it's manually launched by the designer. DILPs usually exist to retry Post-Processes which failed. This eliminates the need for the user to re-promote the data just to initiate the processing. If a DILP is used to recover a failing Post-Process, and the DILP is successful, the good result will overwrite the bad result from the Post-Process. Just because DILPs are primarily used to recover failing Post-Processes, the DCS doesn't make this a restriction. The Data Manager can set up DILPs as stand-alone processes with no corresponding Post-Process. DILPs that exist to recover failed Post-Processes are optional in that they are not counted as required promotion criteria. Stand-alone DILPs can be optional or mandatory, with mandatory DILPs being required to run successfully in order for the data to promote to the next level. The DCS allows the Data Manager to designate which DILPs are mandatory and which are optional."

In other words, although it is possible for a DILP to be a general-purpose task that runs outside of the result collection mechanism of the Control Repository (including simulation and synthesis tasks), there is no infrastructure disclosed particular to synthesis or simulation, or especially as regards the creation of internet accessible data.

Moreover, in the preceding quotes there is an integral presumption of the existence of accounts and authorization, which are not required (but are optionally available) in the present invention. In none of the Van Huben patents, including (707), is there disclosed methods for dynamic creation and assignment of unique account identifiers. There is no awareness of WebBrowser state such as cookies or pathinfo/extra. Instead, what is possible is to use a WebBrowser interface to start jobs associated with an existing (unique) Library-Variation, and retrieve results from those jobs via a WebBrowser, but not to create multiple independent new account IDs to enable independent users to run jobs anonymously and simultaneously to evaluate or demonstrate a circuit or system. The classic stateless execution of a cgi script is not what is contemplated in the present invention.

As per Applicant's Jan. 9, 2003 response to the previous action, the Unique Identifier of the present invention can be used to identify an anonymous or unregistered user and as such is a substantially different art from that disclosed by Van Huben in 5,950,201 where identifiers are created by CRC of data objects. Although a method for authenticating the Unique Identifier by means of an internal checksum is disclosed in the present invention, the identifiers themselves are not checksums of data objects nor are they managed as data objects, and so again, very different from Van Huben. Similar to (201), (707) discloses a "Unique File Reference" or "Unique File Identifier", which I understand to perform a function similar to the "Unique Identification Codes" associated with objects in

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5,812,130 (130) and (201), but in any event both are identifiers associated with individual data objects and not accounts. The claims can possibly be modified to use the more distinct phrase "Unique Dynamically-Assigned Account Identifier", instead of "Unique Identifier". The use of an account identifier within the Van Huben patents appears traditional, with access to a fixed set of files. Although the present invention discloses a preferred authentication mechanism similar to a traditional account login, other methods of the preferred embodiment dispense with the login altogether. The Unique Identifier of the present invention is not a fixed account ID, but effectively a transient, dynamically generated and automatically managed "account". It is associated with a plurality of files and so is not unique to any one file as in (707), etc.

Also regarding the rejection of Claim 1, the first function of Van Huben (707) is that of a Data Management System with a Virtual Control Repository that provides a uniform API to applications so as to permit homogeneous access to heterogeneous data. On top of this is layered an API relevant to the present invention which features an ability to remotely configure processes, launch them and retrieve results. However, as was noted in Applicant's first office-action response regarding (201), it would appear that in (707) these steps ordinarily require separate actions on the part of the user, and perhaps a 4<sup>th</sup> format-conversion step for web accessibility. Indeed, the normal launching of an (optional) simulation process would usually be deeply emdedded in a library promotion process where it would be difficult to present a user user interface. By including the possibility of running general-purpose DILP tasks detached from the usual library promotion process Van Huben doesn't exclude the possibility that these steps could be preconfigured in a suitable manner for educational or evaluation purposes (via the DILP mechanism), but neither does he teach it.

I'm confused about the reference to Col 18: line 20-25 which I have in (201) as referring to BOM notification. I think Col 23 line 17-49 is perhaps most relevant to present Claim 11?

Also regarding rejection of Claim 1, browsing static text, tabular or graphic circuit data via the web was indeed a known art in 1997, but there was no web-based example of dynamically simulating or synthesizing such data with form data and graphical output, to my knowledge.

In summary, with regard to Claim 1, Van Huben, et al. do not teach creating and transmitting a Unique Identifier to said at least one Client.

Regarding the rejection of Claims 2 and 3, these claims depend for their novelty on Claim 1. However, I have amended Claim 3 to add the word "automatically" and change "visual" to "graphical" to clarify and better distinguish the present invention from Van Huben.

Regarding the rejection of Claims 4-6, a unique administrator-assigned and managed account identifier is typical of Unix systems, for example, however these are not

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automatically assigned and destroyed as they are in the present invention. I don't see where Van Huben teaches a server-generated identifier in either (201) or (707). The privileges may be automatically defaulted to a low level in a newly created private library (201), but the account identifiers are not assigned automatically. Van Huben discloses checksums used to identify and validate files, but does not use a checksum to validate the authorization level.

In summary, with respect to Claims 4-6, Van Huben does not teach the creation of a Unique Identifier to keep the data of each user separate from other users with high probability, nor the use of this Identifier to identify temporary files with a limited lifetime, nor making the Identifier verifiable by means of an internal checksum.

Regarding the rejection of Claim 7, a similar response may be made as that to Claims 4-6 – the Unique Identifier is very different from a traditional System Administrator-assigned and managed account. Moreover, Van Huben neither discloses nor anticipates the specific steps shown in Claim 7 for limiting simulations. In particular, Van Huben, et al, do not disclose using a Unique Identifier to index a database and retrieve a simulation count and timestamp, nor the creation and initialization of a new database record associated with the Unique Identifier in the event no existing record is found. Van Huben et al do not disclose that if said timestamp has become older than a certain threshold, the deletion of said simulation record and restarting the simulation count, nor the using of said Identifier, simulation count and timestamp, to determine if the number of simulations per unit time has exceeded some threshold and the continuance of the simulation process only if the threshold has not been exceeded. Van Huben does not teach incrementing the number of simulations performed and save updated record of at least Unique Identifier, updated simulation count and timestamp in database.

Regarding Claim 8, Van Huben (201) teaches the processing of jobs in order of priority (a known art in any event), but it does not disclose methods or circumstances by which the priority might be adjusted automatically, unlike the present invention. Instead it mentions resubmitting jobs at the same priority. The lowering of priority by simulation count is analogous to known art for CPU load management in an ordinary multi-user computer, however, this method is specific to the present invention.

Regarding Claim 9, Van Huben does not disclose the highly interactive method taught by the present application for simulation, and there is no natural mechanism for presenting an intermediate result. Anything is possible via the DILP mechanism, however, no methods are disclosed with regard to the present subject matter by Van Huben. Claim 9 has been modified to correspond with the preferred embodiment in which intermediate files are kept on the Server, and indexed by the "Unique Identifier".

Van Huben does not teach the additional steps related to circuit synthesis before simulation, consisting of transmitting Circuit Synthesis Form Structure Data to the Client, then accepting Circuit Synthesis Form Data from said Client, then synthesizing a circuit

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according to said Circuit Synthesis Form Data, and finally the creation of Form Structure Data for use in step b) of Claim 1.

Regarding Claim 10, our response here is parallel to Claim 1.

Regarding Claim 11, privilege management based on fixed accounts is a known art, however, in this case, the "accounts" may be assigned dynamically according to the Unique Identifier, something Van Huben does not teach.

Regarding Claim 12, Van Huben discloses nothing about cookies or temporary or permanent browser state in any patent but merely mentions the possibility of using a Web Browser to retrieve process results and initiate jobs. Claim 12 is now dependent on a new Claim 14, which makes the assignment of the "Unique ID" contingent upon successfully submission of qualification data.

Regarding Claim 13, logging of data is, in the broader world of server computing a known art, however, this claim is specific to this invention.

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**Conclusion:**

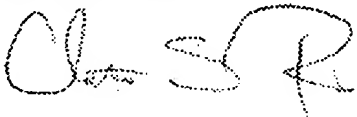
We still hold that the present application Solves a Different Problem from any of the references attached in the office action and that the field is a Crowded Art in which the methods disclosed are a significant advance over what came before. In particular the dynamically and automatically assigned, transient Unique Identifier is a novel art with respect to the field of Computer Simulation.

I will retain profession counsel to discuss redrafting the claims to further clarify the distinctions from the prior art.

**Conditional Request for Constructive Assistance:**

The applicant has amended the Background and the Claims so that they are proper, definite and define novel methods which are also unobvious. If, for any reason this application is not believed to be in full condition for allowance, applicant respectfully requests the constructive assistance and suggestion of the Examiner pursuant to M.P.E.P. S2173.02 and S707.07(j) in order that the undersigned can place this application in allowable condition as soon as possible and without the need for further proceedings.

Very respectfully,



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